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CHANGE PAGE NOTICE NO. 4

This revision furnishes additional Training Device Information Sheets and a corrected List of Devices

May 163, 2/v. 3 - DNA

Supplement No. 1

Change Page Notice No. 4

Training Device Information Sheets and a corrected List of Devices

Training Devices Under Development

Training Devices Under Development

Training Device Guide (Supplement) a

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\$6.60

U.S. NAVAL TRAINING DEVICE CENTER PORT WASHINGTON, NEW YORK

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## CUMULATIVE LIST OF REVISED AND ADDITIONAL PAGES

Insert revised and additional pages. Destroy superseded pages.

Page No. Action Take
Title page Revised
Revised
111-xiii Revised

(Note: The asterisk on pages iii-xiii indicates new device pages added by this Change Page Notice.)

Insert pages for the following devices in alpha-numerical order as shown on pages iii-xiii:

4H2	X14B20
5H9	X14825
6B4	14B27
6B12	X14E10
6F1	X14E12
6F3	X14E13
X8D18	X14E14
X8D2O	14H5
11F3	15A14
11F5	15A16
11H43A	17A19
12D1	20C7
X14A2	21B58
	5H9 6B4 6B12 6F1 6F3 X8D18 X8D20 11F3 11F5 11H43A 12D1

New X14A2 and X14B20 pages replace those currently in book.

Above action taken
by\_\_\_\_\_ date \_\_\_\_

R

## LIST OF DEVICES

<u>D</u>	evice No.	Name
	X1A21	Frontal Structure Models
	1C12	Training Aid, Spitz Planetarium, Model A-3P
	1E11A	ASA-16 Classroom Orientation Trainer
*	1E12	Trainer, AN/ASA-30 Orientation
	1GG9D	Training Aid, Classroom Star Finder and Identifier
	1H1	Weapons System Debrief Projector
	2B3A	Trainer, Flight Simulator, Instrument, Basic Helicopter
*	2B10	Helicopter Instrument Trainer
*	2B13A	Multi-Engine Instrument Trainer
*	x2C11	A-6A B/N Procedures Trainer
	2F34A	Trainer, Weapon System, P5M-1S (Modification)
	2F55	F4H-1 Weapon System Trainer
	2F55B	F4H-1 Weapon System Trainer
	2F55C	F4H-1 Weapon System Trainer
	2F64A	SH-3A Weapon System Trainer
*	2F67	A-6A Weapon System Trainer
*	2F69,2F69A, 2F <b>69</b> B	Trainer, Weapon System P-3A (P3V-1)
*	2F71J	Trainer, Flight, Operational SP-2H (P2V-7S), Japan
	2F72	F8U-2N Weapon System Trainer
*	2 <b>F</b> 75	CH-46A (HRB-1) Operational Flight Trainer
	2Н29	Training Aid, Operable Model, Mk 7, Mod 1-3, Arresting Unit with Cooler
	х2н30	Training Aid, Animated Transparency, Mk 7, Mod 1-3, Arresting Unit showing Fluid Flow

D	evice No.	Name
	X2H32	Training Aid, Operable Model, Mk 7, Mod 2-3, Arresting Unit
	х2н33	Training Aid, Animated Transparency, Mk 7, Med 3, Constant Runout Control Valve
	х2н36	Training Aid, Animated Transparency, Mk 7, Retractable Deck Sheave
	х2н40	Training Aid, Panel Board, Launching Valve Control System
	X2H41	Training Aid, Panel Board, Retraction Engine System
	Х2Н42	Training Aid, Animated Transparency, Retraction Engine System showing Fluid Flow
	х2н43	Training Aid, Animated Transparency, Advance Buffer Unit Coupled with Main Engine Cylinder
	X2H48	Training Aid, Operable Model, Cam Control Unit
	X2H52	Animated Transparencies, Bembing and Rocketry Aiming Factors
	X3A90	Training Aid, Tank Machine Gun, 7.62mm, M-73
	X3A91	Training Aid, Tank Machine Gun, Cal50, M-85
	3B46	Direct Fire Gunsight Trainer
	3C71	Motile Target
	X3C75	Submarine Torpedo Tube Trainer, Hydraulic Ejector
	X3C84	Weapon Demonstrator Panel, Aster
	3C85	Weapon Demonstrator, Mk 16-6 Torpede
	X3E38	Basic Skills and Forward Observer Trainer
*	3E40	Forward Observer Procedures Trainer
*	3E41	Film Strip, Forward Observer, Basic Procedures
	3F43	Hit Indicator, Direct Fire Weapons
	3F46A	Target, Silhouetts, 3-D, Fiberglas, "E"
	3F56	Target, Weather and Shock Resistant
	3F57	Modification Kit, Target System
	3G52	Trainer Set for Sergeant Weapon System

Device No.	<u>Name</u>
3 <b>G</b> 56	Weapon Demonstrator Panel, ASROC
X3G69	Training Aid, Study Card Set, Guided Missile Test Equipment, DSM-54, Type B, Terrier
X3G69A	Training Aid, Study Card Set, Guided Missile Test Equipment, AN/DSM-54
X3G73	Training Aid, Study Card Set, Guided Missile Test Equipment, AN/DSM-18, Talos
X3G73A	Training Aid, Study Card Set, Guided Missile Test Equipment, AN/DSM-18C
X3G77	Honest John XM50 (762mm) Handling and Checkout Trainer
X3G82	Training Aid, Study Card Set, Fire Control, Mk 113, SUBROC
X3G83	Training Aid, Study Card Set, Sonar Equipment, AN/BQQ-1, SUBROC AN/BQQ-2
X3G84	Trainer, Anti-Aircraft Simulator, Red Eye
X3G85	Training Aid, Study Card Set, Target Detecting Device Test Set, Mk 344, Mod 1, Talos
X3G85A	Training Aid, Study Card Set, Guided Missile Fuze Test Set, Mk 344, Mod 1
X3G86	Training Aid, Study Card Set, Guided Missile Test Equipment GM/122 DSM
X3G88	Study Card Set, Guided Missile Test Equipment, AN/DSM-55
x3G95	Training Aid, Guided Missile Scale Model, Mk 7, Talos, Launcher System
x3G96	Training Aid, Study Card Set, Guided Missile, SUBROC
X3G97	Training Aid, Study Card Set, Missile Test Equipment, SUBROC
X3G98	Training Aid, Guided Missile Scale Model, Mk 11-0, Tartar Launching System
X3G100	Trainer, Sergeant Ground Support Equipment (GSE)
X3G101	Training Aid, Guided Missile Scale Model, Mk 12, Talos, Launcher System

De	evice No.	Name
	X3G107	Training Aid, Guided Missile, Take-Apart Model, LaCrosse
	X3G108	Training Aid, Guided Missile, Take-Apart Model, Hawk
	X3G109	Training Aid, Take-Apart, Rocket Model, Honest John XM-50, Conventional Warhead
	X3G110	Training Aid, Take-Apart Rocket Model, Little John XM-51
	X3G111	Training Aid, Model, E19R2 Chemical Warhead, Honest John
	X3G112	Training Aid, Model, E20 Chemical Warhead, Little John
	X3G113	Training Aid, Study Card Set, Guided Missile <sup>T</sup> est Equipment, AN/DSM-60
	X3G114	Study Card Set, Guided Missiles Data Recorder AN/SKH-1
	X3G115	Study Card Set, Guided Missiles Data Receiver AN/UKR-10
	X3G116	Study Card Set, Guided Missiles Miss Distance Indicator, AN/USA-11
	X3G117	Training Aid, Animated Transparency, Terrier Phase Comparison
	X3G118	Training Aid, Terrier Roll Stabilization System
	X3G121	Training Aid, Study Card Set, Sonar Equipment AN/BQQ-3, SUBROC AN/BQQ-2
	X3G122	Training Aid, Study Card Set, Sonar Equipment AN/BQG-2, SUBROC AN/BQQ-2
	3G124	Trainer, Sergeant Rocket Motor and Initiator Cutaway
	4A1	Projector, Motion Picture, Sound, 16mm
	4A2	Projector, Still Picture, Opaque Object, 10" x 10"
	4A3,4A3A	Recorder/Reproducer, Tape, Audio, Stereo Companion Unit
	4A4	Reproducer, Disc Type, 4-Speed
	4A 5	Projector, Still Picture, Overhead, Portable, 10" x 10"
	4A6	Projector, Strip Film, 35mm
*	4B17	Slide/Tape Set
*	4B18 Series	Slide/Tape Sets, Visual Recognition Program

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Revised May 1963

D	evice No.	Name
*	4H1A,4H1B, 4H1C	Screen Projection, Portable (70" x 70"); Screen Projection, Wall (96" x 96"); Screen Projection, Wall (108" x 144")
*	4H2	Logic Programmer, Animated Panel (Nuclear Weapon/Guided Missile)
	5 <b>F</b> 3	Electronic Warfare Recognition Program
*	5H9	Projector, Slide, Recognition, Tachistoscopic
*	6B4	Digital Computer Demonstrator
	6B5	Digital Building Block Kit
	6B6	Digital Lecture Demonstration Unit
*	6B12	Transistor, Printed Circuit Trainer, Radar
	6D2	Radiosonde Trainer
	6D3	Tropospheric Circulation Demonstrator
*	6F1	30 Bit Remote Control Register
*	6 <b>F</b> 3	Computer Control Demonstrator
	6H1	Radiosonde Demonstrator
*	X8D18	Training Aid, Electronic Circuit, Single Sideband
*	X8D20	Training Aid, Animated Panel, AN/ARC-38 and AN/ARC-52 Radio Set Auto-Positioners
	x8H5	Radio Signal Interference Trainer
	X11A15	Electro Magmetic Demonstrator
	X11A16	Animated Transparency, Magneto Timing Demonstrator
	X11A17	Transparencies, Coil Type Cage Operation Display
	X11A18	Animated Transparency, Generator Regulator Demonstrator (Carbon Pile)
	1108	Radar Repair Training Set
*	11F3	Radiological Decontamination Trainer
*	11F5	Alpha Field Survey Meter Demonstrator
	X11H29	Training Aid, Map Reading
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Device No.	Name
X11H41 and X11H41A	Animated Transparencies, Horizontal and Vertical Circle Readings
* 11H43A	Technamation Materials Kit with Polarizing Spinner
х11н44	Cargo Handling Demonstrator
X12A1	Training Aid, Guided Missile Transparencies, Weapons Direction System, Mk 3
X12A2	Training Aid, Guided Missile Transparencies, Weapons Direction System, Mk 4
X12A3	Training Aid, Guided Missile Charts, Weapons Direction System, Mk 3
X12A4	Training Aid, Guided Missile Charts, Weapons Direction System, Mk 4
X12A5	Training Aid, Guided Missile Transparencies, Weapons Direction System, Mk 5
X12A6	Training Aid, Guided Missile Transparencies, Weapons Direction System, Mk 6
X12A7	Training Aid, Guided Missile Transparencies, Weapons Direction System, Mk 7
X12A8	Training Aid, Guided Missile Charts, Weapons Direction System, Mk 5
X12A9	Training Aid, Guided Missile Charts, Weapons Direction System, Mk 6
X12A10	Training Aid, Guided Missile Charts, Weapons Direction System, Mk 7
* 12D1	Firing Circuit Panel, Mk 10 Mod 0, Guided Missile Launching System (GMLS)
X12F1	Training Aid, Animated Transparency, Fire Control System, Mk 74, Doppler
X12F2	Training Aid, Animated Transparency, Guided Missile Fire Control System, Mk 74, Range Ambiguity
X12F4	Training Aid, Guided Missile Transparencies, Fire Control System, Mk 74, Computer, Mk 118

Device No.	<u>Name</u>
X12F5	Training Aid, Guided Missile Transparencies, Fire Control System, Mk 76, Computer, Mk 119
X12F6	Training Aid, Guided Missile Transparencies, Fire Control System, Mk 77, Computer, Mk 111, Mod 0
X12F7	Training Aid, Guided Missile Charts, Fire Control System, Mk 74, Computer, Mk 118
X12F8	Training Aid, Guided Missile Charts, Fire Control System, Mk 76, Computer, Mk 119
X12F9	Training Aid, Guided Missile Charts, Fire Control System, Mk 77, Computer, Mk 111, Mod 0
X12F10	Training Aid, Animated Transparency, Guided Missile Fire Control System, Mk 77, AN/SPG-49, Antenna
X12F12	Training Aid, Guided Missile Transparencies, Fire Control System, Mk 77, Radar Operations
X12F13	Training Aid, Guided Missile Charts, Fire Control System, Mk 77, Radar Operations
X12F14	Training Aid, Guided Missile Transparencies, Fire Control System, Mk 77, Computer, Mk 111, Mod 1
X12F15	Training Aid, Guided Missile Charts, Fire Control System, Mk 77, Computer, Mk 111, Mod 1
X12F16	Training Aid, Guided Missile Transparencies, AN/SPG-55, Radar Set
X12F17	Training Aid, Guided Missile Transparencies, AN/SPM-11, Radar Test Set
* X14A2	ASROC Shorebased Trainer (Mk 114, FCS Mod)
X14A6	ASW Coordinated Tactics Trainer
14B17	Julie Target Simulation
14B19A	Julie Airborne Simulator (Juliette)
14B19B	Portable Julie Ground Trainer
* 14820	Trainer, AN/ASA-16 Operator
14821	Airborne Jezebel Simulator

Device No.	Name
14B22	Trainer, Sonobuoy, Flight, Julie Modification
14B24	Airborne Magnetic Anomaly Simulator
* X14B25	Trainer, AN/ASN-30 Operator
* 14B27	Trainer, Julie/Jezebel Rollout (SOLTS)
14E7	Trainer, Airborne Sonar Classroom
* X14E10	Trainer, AQS-10 Airborne Sonar Group
* X14E12	Shipboard AN/SQS-26 Sonar Classification Trainer
* X14E13	Study Card Set, Sonar Detecting-Ranging Set, AN/SQS-26AX
* 14E14	Sonar Operator Target Classification Trainer (5-Station)
X14H4	Helicopter, ASW Tactical Team Trainer
* 14H5	Training Aid, ASW Transparencies Kit
* 15A14	Shipboard Universal Radar Land Mass Simulator
15A15	Simulator, Rader Scope Effects
* 15A16	AN/TPS-34 Trainer
15B1	Simulator, Radar Signal, AN/MPQ-4
X15B6A	Simulation Ground Surveillance Radar, Operator Trainer
X15D8	Operator Trainer, AN/TPQ-10, Radar Control, Central
15E5	Radar Signal Interference Trainer, KU-Band
X17A18	Trainer, Range Estimation, Small Arms
* 17A19	Artillery, Land Mines and Mortar Simulator
17C2	Trainer, Rocket Launcher
X18A8	Training Aid, Control Monitor DCU-75/A
X18A9	Training Aid, Control Monitor DCU-74/A
X18A10	Training Aid, Control Monitor DCU-77/A
1884	Tactical Atomic Demolition Munition (TADM) Trainer

Device No.	<u>Name</u>
X18C2	Fuzing and Firing Panel, Mk 28, Mod 0/1
18C31	Training Aid, Weapon Demonstrator, Mk 43
18C32	Training Aid, Fuzing and Firing Panel, Mk 43
X18C36	Training Aid, Special Weapons Charts, Missiles, Thermonuclear
X18C37	Training Aid, Special Weapons Charts, Missiles, Conventional
X18C38	Training Aid, Special Weapons Charts, Conventional Missile Components
X18C39	Training Aid, Animated Transparency, Fuze, U.S., Bomb, Nose, M904
X18C40	Training Aid, Animated Transparency, Fuze, British, Tail, Barometric, No. 908
X18C41	Training Aid, Animated Transparency, Fuze, U.S., Tail, Hydrostatic, AN-MK 230, Mod 4
X18C42	Training Aid, Animated Transparency, Pistol, British, Bomb, Tail, No. 73, Mk 2
X18C43	Training Aid, Animated Transparency, Terrier BW-1, Safe/Arm Device
X18C45	Training Aid, Animated Transparency, Guided Missile, U.S., LaCrosse, Base Detonating Fuze
X18C46	Training Aid, Animated Transparency, Guided Missile, U.S., Bullpup, Fuze, Mk 312
X18C47	Training Aid, Animated Transparency, Closed Loop Hydraulic System
X18C48	Training Aid, Animated Transparency, Nike Hercules, M3OA1, Safe/Arm Device
X18C49	Training Aid, Animated Transparency, Fuze, U.S., Bomb, Nose, AN-M103A1
X18C54	Cutaway Model, Mk 55 Warhead
X18C55	Cutaway Model, Mk 45 Warhead
X18C56	Cutaway Model, Mk 34-2 Warhead

Device No.	<u>Name</u>
X18C57	Cutaway Model, Mk 31-0 Warhead
X18C58	Cutaway Model, Mk 30-2 Warhead
X18C59	Cutaway Model, Mk 17-1 Depth Charge
X18C60	Cutaway Model, Mk 44-0 Warhead
X18C61	Fuzing and Firing Panel, Mk 17-1 Depth Charge
X18C62	Weapon Demonstrator Panel, Davy Crockett Projectile
X18C63	Weapon Demonstrator Panel, BLU/2B POD (B-58)
X18C64	Weapon Demonstrator Panel, Mk 50 Warhead
X18C65	Weapon Demonstrator Panel, Mk 52-1 Warhead
X18C66	Weapon Demonstrator Panel, Mk 53 Basic Assembly/Bomb
X18C67	Weapon Demonstration Panel, Mk 56-0 Warhead
X18C68	Weapon Demonstrator Panel, Mk 59-0 Warhead
X18C69	Weapon Demonstrator Panel, XM-454 Projectile
X18C70	Weapon Demonstrator Panel, Mk 45-0 Warhead
X18C71	Weapon Demonstrator Panel, Mk 28-X3 Bomb
X18C73	Fuzing and Firing Panel, Honest John
X18C75	Fuzing and Firing Panel, Mk 57
X18C76	Weapon Demonstrator Panel, Mk 57 Bomb
<b>18F1</b> 5	Training Aid, Animated Transparency, Mk 101, In-Flight Safety Switch
18F16	Training Aid, Animated Transparency, Mk 101, Weapon Connector
18F17	Training Aid, Animated Transparency, Mk 101 Hydrostatic Switch
18F21	Training Aid, Animated Transparency, Mk 101, Manual Safety Switch
X19A3	Target Simulation Equipment, Weapon System, Terrier Equipped Cruisers

De	vice No.	Name
	X19A4A	Target Simulation Equipment, Weapon System, Tartar Equipped Destroyers
*	2007	Simulator, Fire Control and Launcher (DE MK-9)
	21A37	FBM Team Trainer, New London
	X21A38	Submarine ASW Training Facility, Pearl Harbor
	21A39	FBM Team Trainer, Charleston
	21855	Trainer, Submarine Sonar Operator
*	21B58	Torpedo Data Computer Operator Trainer
	22DD17A	ASW Transparency Kit (Modified)
	29FA7A	Ships Running and Riding Lights
	48F3A	Training Aid, Monitor/Control Box, T-349A
	n/A	Scale Models for Amphibious Assault Trainer, Device 16F2
	N/A	Combat Environmental Rifle Range Development
	N/A	16mm Motion Picture Projector

Device: TRAINER, AN/ASA-30 ORIENTATION

13 March 1963

Device No.: 1E12

## 1. GENERAL DESCRIPTION

The device is a mockup of the AN/ASN-30 and AN/ASQ-80 Rear Data Display, mounted on a metal frame with the control panel arrangement in the exact relative position found aboard the S-2E aircraft. A 35mm remote control projector and a set of forty-eight 35 mm color slides of stereotyped situations are provided with the device. Upon proper switch selection by the trainee, the instructor will display an appropriate slide.

Thé device is classified Confidential.

2. TRAINING TASKS PERFORMED

The device familiarizes the trainee with the AN/ASN-30 controls.

3. CATEGORIES OF PERSONNEL TRAINED

The trainer will be used by Aviation Officer personnel engaged in training as ASW Tactical Coordinators (S-2E).

4. PLANNED SITE OF INSTALLATION

FAETULANT, FAETUPAC and activities engaged in training AN/ASN-30 Tactical Coordinators.

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation Area: In a classroom
  - b. Size of Assembled Device: 31" x 80" x 56"
  - c. Number of Pieces: One
  - d. Power Requirements: 115 Volt, 60 Cycle AC, properly fused
- 6. TRAINING AGENCY:

DCNO (AIR)

7. PROJECTED FLEET AVAILABILITY DATE

January 1963

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#### TRAINING DEVICE INFORMATION SHEET

Device: HELICOPTER INSTRUMENT TRAINER

Device No: 2B10

## 1. GENERAL DESCRIPTION

This device is a trailerized helicopter cockpit that has cockpit motion. It is similar in configuration and flight characteristics to the SH-3A (HSS-2) except that it does not have a tactics area. Engine response is similar in performance to the twin gas turbines in the SH3A. Device 2B10 has provisions for the incorporation of a visual attachment.

The device will be utilized to train helicopter pilots in all weather helicopter flight procedures.

The device is unclassified.

## 2. TRAINING TASKS PERFORMED

The device provides realistic training in all weather helicopter operations including basic instruments and radio navigation procedures.

## 3. CATEGORIES OF PERSONNEL TRAINED

The trainer is primarily for the advanced helicopter pilots, but it may be utilized for less experienced pilots training in basic helicopter instrument flight procedures.

## 4. PLANNED SITE OF INSTALLATION

The first three trainers are presently allocated to:

CNABATRA, Pensacola, Fla. MCAF, Santa Ana, Calif. MCAF, Kaneoke, Hawaii

## 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

- a. Installation Area Preferably an area adjacent to a training complex including a hard stand (pad) to rest the trailer on and with proper electrical power outlets.
  - b. Shipping package: 40 foot trailer

(Sheet 1 of 2)

## DEVICE 2B10

(Training Device Information Sheet, Cont'd)

- c. Number of pieces: one (trailer)
- d. Size: 8'w x 40' 1 x 12'6" h
- e. Weight: 42,000 lbs. (approx.)
- f. Power: 110 Volt AC single phase and 208 Volt AC 3 phase.
- g. Other Equipment Required:
  Drain for water codensation generated by air conditioned units.
- 6. TRAINING AGENCY

DCNO (AIR)

7. PROJECTED AVAILABILITY DATE

Prototype (Unit #1) mid August 1963 Unit #2 estimated Nov 1963 Unit #3 Jan 1964

Device: Multi-Engine Instrument Trainer

Device No.: 2B13A

## 1. GENERAL DESCRIPTION

This device is fixed base. It consists of a cockpit (flight) section, associated cockpit motion assembly, Instructor station, computer racks, and power supply. Its general characteristics are similar to the S-2A (S2F-1) aircraft.

The flight section has a pilot and observer seat with a complete set of flight controls and instruments for the left side.

This device is capable of furnishing realistic training for pilots in all phases of instrument and radio procedures from the most basic to the most advanced phases.

The device has provisions for a visual attachment, and one unit of Device 2H53, a visual attachment, has been planned for attachment in August 1963.

## 2. TRAINING TASKS PERFORMED

This device affords the pilot training in simulated multi-engine equipment for all phases of basic and advanced instrument flying, including a variety of types of radio equipment.

It is anticipated that this device will supplement and eventually replace Device 2F75, a Multi-Engine Instrument Trainer.

## 3. CATEGORIES OF PERSONNEL TRAINED

This trainer is capable of utilization by both experienced and inexperienced aviators.

## 4. PLANNED SITE OF INSTALLATION

U. S. Naval Air Station, Corpus Christi, Texas (CNAVANTRA), first six units.

## 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

- a. Fixed base; temporary or permanent building with associated air conditioning.
- b. Size of the shipping package: ship in closed van either crated or uncrated, seven (7) pieces. Space required within trainer room is 28'8" 1 x 23'11" w x 10' ceiling.

(Sheet 1 of 2)

## DEVICE 2B13A

(Training Device Information Sheet Cont'd)

- c. Number of pieces: Seven (7)
- d. Size: Assembled device; slightly smaller than the resize listed in  $5b. \ \ \,$ 
  - e. Weight of assembled device: 16,300 pounds
- f. Power required: 208/120 volts, 60 cycle, 3 phase, 4 wire, current 16.8 KV, .83 power factor.
- g. Other equipment required: Current publications and charts for use in flight planning and execution of flight.
  - h. Special considerations: NA

## 6. TRAINING AGENCY

DCNO (AIR)

## 7, PROJECTED AVAILABILITY DATE:

Prototype installed and operational 15 March 1963. Production units (5) to be installed NAS Corpus Christi during the calendar year 1963. Future devices planned (20) FY'64. Allocation to be determined.

Device: A-6A B/N PROCEDURES TRAINER

Device No.: X2Cl1

4 April 1963

## 1. GENERAL DESCRIPTION

The device consists of a classroom mockup of the right hand seat of the A-6A and associated instrument panel and sub panels. All switches, knobs and warning lights are installed.

The device is unclassified.

## 2. TRAINING TASKS PERFORMED

Permit classroom observation of the student B/Ns response to the stimulus provided by warning lights or verbally described by the instructor.

Permit cockpit familiarization of student B/N without tying up either an aircraft or WST.

3. CATEGORIES OF PERSONNEL TRAINED

A-6A student B/Ns

4. PLANNED SITE OF INSTALLATION

NAS Oceana (VA-42)

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Can be used in any classroom
  - b. Power required: 110 VAC 10
  - c. One piece
- 6. TRAINING AGENCY

BUWEPS

7. PROJECTED AVAILABILITY DATE

June 1963

Device: A-6A WEAPON SYSTEM TRAINER

<u>Device No.</u>: 2F67 4 April 1963

## 1. GENERAL DESCRIPTION

This device consists of a synthesized weapon system representing the A-6A aircraft. The cockpit, with all panels, is reproduced with all systems operable. The cockpit is mounted to permit limited pitch and limited roll motion to enhance the feel of the device.

The device is classified Confidential.

## 2. TRAINING TASKS PERFORMED

The device will permit instruction and close observation in all phases of operation, starting with crew entering the cockpit. It will allow the planning and conduct of a complete mission.

- 3. CATEGORIES OF PERSONNEL TRAINED
  - a. Pilot students
  - b. B/N Students
- 4. PLANNED SITE OF INSTALLATION

NAS Oceana, Virginia

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Trailers can be located on concrete or other suitable pad.
- b. Device consists of two trailers each 40 feet long and interconnecting cabling and catwalk.
  - c. Power requirements: 120/208 VAC 30 4 wire 60 cycle at 85 KVA
- 6. TRAINING AGENCY

BUWEPS

7. PROJECTED AVAILABILITY DATE

December 1963

Device: TRAINER, WEAPON SYSTEM P-3A (P3V-1)

Device No.: 2F69, 2F69A, 2F69B

4 April 1963

## 1. GENERAL DESCRIPTION

This device consists of a synthesized weapon system representing the P-3A Aircraft. The interior of the P-3A Aircraft is faithfully reproduced, and the trainer has Julie, Jezebel, MAD, ECM, ASH, Active Ranging/Directional Listening Sonobuoy capabilities, and incorporates the ASA-16 Integrated Display System.

This device is Confidential.

## 2. TRAINING TASKS PERFORMED

The device provides realistic training in all phases of ASW and also flight/instrument training for P-3A type aircraft.

## 3. CATEGORIES OF PERSONNEL TRAINED

The trainer is used to train Naval Aviators and Naval Aircrewmen in all phases of Fixed Wing ASW.

## 4. PLANNED SITE OF INSTALLATION

Mobile trainer planned for installation as follows:

Device	Place
2F69	NAS Patuxent River
2F69A	NAS Moffett
2F69B	NAS Jacksonville
2F69B	NAS San Diego
2F69B	NAS Brunswick
2F69B	NAS Barbers Point

## 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

- a. Installation Area: Concrete pad of sufficient area and adjacent to power supplies
  - b. Size of Shipping Package: unknown

(Sheet 1 of 2)

## DEVICE 2F69/2F69A/2F69B

(Training Device Information Sheet; Cont'd)

- c. Number of Pieces: Two
- d. Size: Each trailer 40' X 12' X 8', expandable
- e. Weight: Unknown
- f. Power Required: No special power requirements anticipated
- g. Other Equipment Required: None
- h. Special Considerations: Installation site should allow for expansion of the OFT trailer of Device 2F69B to accommodate a visual display attachment similar to Device 2H53.
- 6. TRAINING AGENCY

DCNO (AIR)

7. PROJECTED FLEET AVAILABILITY DATE

2F69 - Installed

2F69A - September 1963

2F69B - First two units - 1965

Second two units- 1966

DEVICE 2F71J

## TRAINING DEVICE INFORMATION SHEET

Device: TRAINER, FLIGHT, OPERATIONAL SP-2H (P2V-7S), JAPAN

<u>Device No.</u>: 2F71J 4 April 1963

## 1. GENERAL DESCRIPTION

This device is to provide a simulated flight section of the SP-2H aircraft having the capability of being connected to Device 15AR1J, SP-2H Tactics Trainer, Japan, thereby creating a complete WST. Basically the device is identical to Device 2F71, SP-2H OFT but some equipment has been eliminated that is not releasable to Japan.

The device is unclassified.

## 2. TRAINING TASKS PERFORMED

The device will be used to train aircrews of the Japanese Maritime Defense Force in the ASW Capability of the SP-2H aircraft.

3. CATEGORIES OF PERSONNEL TRAINED

The trainees will be officers and enlisted men of the Japanese Maritime Defense Force.

4. PLANNED SITE OF INSTALLATION

MAAG, Japan for MADF Airfield, Kanoya

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
- a. Installation Area: In an air conditioned building and adjacent to Device 15ARIJ
- b. Size of Shipping Package: Special shipping required for transportation to Japan
  - c. Number of Pieces: 19
  - d. Size: 38½ X 7 3/4 X 8 3/4
  - e. Weight: 16,700 pounds
  - f. Power Required: 208V, 3 phase 4 wye 60 cycle

(Sheet 1 of 2)

## DEVICE 2F71J

(Training Device Information Sheet; Cont'd)

- g. Special Considerations: None
- 6. TRAINING AGENCY

DCNO (AIR)

7. PROJECTED FLEET AVAILABILITY DATE

September 1963

Device: CH-46A (HRB-1) OPERATIONAL FLIGHT TRAINER

Device No.: 2F75

## 1. GENERAL DESCRIPTION

This device is a trailerized CH-46A (HRB-1) Helicopter OFT. It includes cockpit motion, a full range of flight and Engine responses of the CH-46A, radio and navigational aids and is configured to the CH-46A.

The trailer consists of a flight section, instruction station, computer and power racks. It is air conditioned.

The device will be utilized to train helicopter pilots and copilots in all weather flight procedures and in the procedures used in the CH-46A.

Device 2F75 has provisions for a visual attachment and the trailer has expandable siding.

## 2. TRAINING TASKS PERFORMED

The device provides realistic training for helicopter pilots utilizing the CH-46A helicopter. It provides a full range of training in ground and air procedures, emergency procedures and all weather flying.

## 3. CATEGORIES OF PERSONNEL TRAINED

The trainer is specifically for the use of helicopter pilots attached to Marine Assault Helicopter Squadrons employing CH-46A (HRB-1) helicopter. However, the trainer is capable of furnishing valuable training in all weather flying techniques to any group of helicopter pilots.

#### 4. PLANNED SITE OF INSTALLATION

MCAF, New River, North Carolina

## 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

- a. Installation area: Prefereably an area adjacent to a training complex including a hard stand (pad) to rest the trailer on and with proper electrical outlets.
  - b. Shipping package: 40 foot trailer
  - c. Number of pieces: One (trailer)
  - d. Size: 8'w x 40'1 x 12'6" h
  - e. Weight: 41,500 pounds (approximately)
  - f. Power: 110 volt AC single phase/208 volt AC 3 phase (Sheet 1 of 2)

## DEVICE 2F75

(Training Device Information Sheet Cont'd.)

- g. Other equipments required:Drain for water condensation generated by air conditioning units.
- 6. TRAINING AGENCY

DCNO (AIR)

7. PROJECTED AVAILABILITY DATE

Prototype (Unit #1) December 1963

DEVICE 3E40

## TRAINING DEVICE INFORMATION SHEET

11 APRIL 1963

DEVICE: FORWARD OBSERVER PROCEDURES TRAINER

DEVICE NO.: 3E40

## 1. GENERAL DESCRIPTION

The device is an animated transparency. It has a number of transparent photographs of typical terrain scenes and targets. These terrain scenes have the binocular mil scale superimposed on the photograph. Two transparent arms, one on either side can be swung forward by the instructor over the terrain scene to represent artillery bursts. Plastic bursts of several sizes are provided. Maps are provided to represent the area of one of the terrain scenes.

The device is unclassified.

2. TRAINING TASKS PERFORMED

This device can be used to teach the basic principles in forward observer procedures.

3. CATEGORIES OF PERSONNEL TRAINED

The trainer can be used in basic instruction of forward observer training.

4. PLANNED SITE OF INSTALLATION

Not applicable

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

This is a portable device and can be used in any standard type classroom equipped with an 1BC series overhead projector.

6. TRAINING AGENCY

CMC (A03C)

7. PROJECTED AVAILABILITY DATE

Subject to U.S. Marine Corps Evaluation FY 63.

DEVICE 3E41

## TRAINING DEVICE INFORMATION SHEET

11 APRIL 1963

DEVICE: FILM STRIP, FORWARD OBSERVER, BASIC PROCEDURES

DEVICE NO.: 3E41

## 1. GENERAL DESCRIPTION

The device is a set of color film strips to be used with a suitable projector and screen. These strips provide a variety of terrain features and climatic conditions which could be encountered by a forward observer. The film strip was made to be used in conjunction with Device 3E40 an animated transparency on basic forward observer procedures.

The device is unclassified.

2. TRAINING TASKS PERFORMED

This device can be used in conjunction with Device 3E40 to teach forward observer procedures.

3. CATEGORIES OF PERSONNEL TRAINED

The trainer can be used in basic instruction of forward observer training.

4. PLANNED SITE OF INSTALLATION

Not applicable

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

This is a portable device which can be used in any standard classroom provided with a suitable 35mm projector and screen.

6. TRAINING AGENCY

CMC (A03C)

7. PROJECTED AVAILABILITY DATE

Subject to U.S. Marine Corps Evaluation FY 63.

11 APRIL 1963

DEVICE: SLIDE/TAPE SET, THE U.S. NAVAL TRAINING DEVICE CENTER

DEVICE NO.: 4B17

## 1. GENERAL DESCRIPTION

The device, a slide/tape set, will be an automatic, generalized audio-visual presentation on the U.S. Naval Training Device Center. The device, with an estimated running time of 15 minutes, is for projection from Device 11832, Sound/Slide Projector, or functional equivalent.

The device will be unclassified.

2. TRAINING TASKS PERFORMED

The device will be used for briefing purposes.

3. CATEGORIES OF PERSONNEL TRAINED

The device will be used for general briefing of different types of audiences, e.g., military officers and enlisted men, scientists, educators, contractors, students, new personnel, etc.

4. PLANNED SITE OF INSTALLATION

Not applicable

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

Not applicable

6. TRAINING AGENCY

ONR

7. PROJECTED AVAILABILITY DATE

Dec 1963

11 APRIL 1963

DEVICE: SLIDE/TAPE SETS, VISUAL RECOGNITION PROGRAM

DEVICE NO.: 4B18 SERIES

1. GENERAL DESCRIPTION

Each device in this series will consist of a magazine of 2" x 2" slides, a tape-loaded cartridge, and one copy of the program script. Each device may be projected from Device 11B32, Sound/Slide Projector, or the slides may be projected from a slide projector (Device 5H9 or Device 5QQ6) while the instructor reads the program script to his class.

Each device in this series will be classified.

2. TRAINING TASKS PERFORMED

Devices in this series will be used in classrooms in the visual recognition program.

3. CATEGORIES OF PERSONNEL TRAINED

Devices in this series will be used in training Naval officer and enlisted personnel scheduled for training in the visual recognition of ships and aircraft.

4. PLANNED SITE OF INSTALLATION

Not applicable

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

Not applicable

6. TRAINING AGENCY

DCNO(AIR)

- 7. The first device in this series will be the 4B18A, Slide/tape Set, Visual Recognition Program Ships. It will provide instruction in recognition features of three of the most frequently reported Soviet Trawlers; Lentra, Okean Trawler, and Sekston.
- 8. PROJECTED AVAILABILITY DATE

4B18A - June 1963

12 APRIL 1963

DEVICES: SCREEN, PROJECTION, PORTABLE (70" x 70")

SCREEN, PROJECTION, WALL (96" x 96") SCREEN, PROJECTION, WALL (108" x 144")

DEVICE NOS.: 4H1A (70" x 70") 4H1B (96" x 96")

4H1C (108" x 144")

## 1. GENERAL DESCRIPTIONS

The three devices are commercial-type projection screens with semi-diffusing, white reflecting surfaces. Each device is equipped with a metal case containing a spring-loaded roller. Each screen, when not in use, may be rolled up into its case for protection.

Device 4HIA is mounted on an adjustable stand.

Devices 4HlB and 4HlC are designed to be mounted on walls or from ceilings.

The devices are unclassified.

2. TRAINING TASKS PERFORMED

The devices reflect projected images.

3. CATEGORIES OF PERSONNEL TRAINED

The devices support personnel training in all categories.

4. PLANNED SITE OF INSTALLATION

Not applicable

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

Not applicable

6. TRAINING AGENCY

DCNO(AIR)

7. AVAILABILITY

<u>UNITS</u>		
	DELIVERED	DUE IN MAY 63
4H1A	150	230
4H1B	40	100
4H1C	20	10

8 April 1963

Device: LOGIC PROGRAMMER, ANIMATED PANEL. (NUCLEAR WEAPON/GUIDED MISSILE)

Device No.: 4H2

## 1. GENERAL DESCRIPTION

This device will be a power and programming console for operating various animated display panels on Nuclear Weapons and Guided Missiles Systems. The console will be compact and mobile. Solid state electronic modules will be used. Individual display panels will provide the means for quick adaption of the console for specific application,

The device will be unclassified.

#### 2. TRAINING TASKS PERFORMED

This device will provide training activities with a means of operating a variety of display panels from one console unit. Simplicity of operation, and ease of maintenance will be inherent features for optimum utilization.

## 3. CATEGORIES OF PERSONNEL TRAINED

The device will be used in conjunction with animated panels for classroom training on Nuclear Weapon and Guided Missile System operations.

4. PLANNED SITE OF INSTALLATION

Not applicable

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation area: Classroom, mobile from room to room
  - b. Size of shipping package: 20 cu. ft.

  - c. Number of pieces: one d. Size: 2" wide x 2' deep x 4" high e. Weight: 100 1bs.

  - Power Required: 110V, 60 cycle
  - g. Other Equipment Required: Animated display panel with adaption equipment
- 6. TRAINING AGENCY

DCNO(AIR) and BUPERS

7. PROJECTED AVAILABILITY DATE

June 1963

11 APRIL 1963

DEVICE: PROJECTOR, SLIDE, RECOGNITION, TACHISTOSCOPIC

DEVICE NO.: 5H9

1. GENERAL DESCRIPTION

The device is a portable slide projector in a carrying case, and is used to project 2" x 2" slides. Components consist of a slide magazine, remote control cord and switch and a tachistoscopic shutter for optional use in controlling exposures of recognition slides.

The device is unclassified.

2. TRAINING TASKS PERFORMED

The device is used to project slides.

3. CATEGORIES OF PERSONNEL TRAINED

The device supports personnel training in all categories.

4. PLANNED SITE OF INSTALLATION

Not applicable

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

Not applicable

6. TRAINING AGENCY

DCNO(AIR)

7. AVAILABILITY

Delivered - 200 units.

Device: DIGITAL COMPUTER DEMONSTRATOR

Device No: 6B4

## 1. GENERAL DESCRIPTION

The 6B4 is a classroom demonstrator which is capable of demonstrating the theory and operation of basic logic elements, functional subassemblies and a complete computer system. The device consists of two panels, the command panel and the logic demonstrator panel. The logic demonstrator panel demonstrates the theory and operation of basic elements, functional subassemblies and, when connected to the command panel, serves as the input, memory and control sections of the computer.

## 2. TRAINING TASKS PERFORMED

- a. Teaches basic digital circuits by the use of modules interconnected by patchcords on the logic demonstrator panel.
- b. Teaches the fundamental concepts of storage, control, timing, arithmetic and programming.
- c. Develops an understanding of the relationships of functional subassemblies.
  - d. Teaches computer operation and computer organization.
- 3. CATAGORIES OF PERSONNEL TRAINED

Device 684 was developed to be used by enlisted personnel in the Aviation Electrician, Aviation Electronics Technicians, Aviation Fire Control Technicians and Training Device personnel with a thorough grounding in mathematics, DC and AC electronics theory. Officer personnel have completed the aviation Electronics Technician School (Class B) or the equivalent.

4. PLANNED SITE OF INSTALLATION

Naval Air Technical Training Command, Memphis, Tennessee

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation area: Classroom

(Sheet 1 of 2)

## DEVICE 6B4

(Training Device Information Sheet, Cont'd)

- b. Size of Shipping Package: Van shipment, not crated.
- c. Number of pieces: Two
- d. Size: (each console) 72" long, 682" high, 272" deep.
- e. Weight: (each console) 800 pounds
- f. Power Required: 115V AC at 60 cycles

  Maximum power consumption (both units): 1000 Watts
- g. Other Equipment Required: None
- h. Special Considerations: Classroom must be 12 feet in one dimension to permit use of both consoles as a Digital Computer Trainer.
- 6. TRAINING AGENCY

DCNO (AIR)

# 7. PROJECTED AVAILABILITY DATE

2 units installed at NATTC, Memphis Other units to be delivered with lead time of nine months (approx.)

11 APRIL 1963

DEVICE: TRANSISTOR, PRINTED CIRCUIT TRAINER, RADAR

DEVICE NO.: 6B12

## 1. GENERAL DESCRIPTION

The transistor Printed Circuit Training Device is a transistorized version of the Navy Radar Special Circuit Chasis. Some of the circuits may be very similar to those found in Navy equipment, while others may contain wide variations. It is a completely self-contained trainer, housed on a stainless steel chasis measuring 17 inches long, 10 inches wide, and 3 inches deep. All controls for the operation of the trainer and the monitoring test jacks are located on the chassis. The interconnecting wiring, dual-regulated power supply, and the transistor tester are located under the chassis. The trainer consists of the following items:

- a. Main Chassis
- b. Eleven (11) printed circuit boards
- c. A chassis bracket and a power cord.

The device is unclassified.

#### 2. TRAINING TASKS PERFORMED

The trainer was designed to provide practical experience in the operation, adjustment, trouble-shooting, and repair of transistor circuits on printed circuit boards.

## 3. CATEGORIES OF PERSONNEL TRAINED

The trainer is designed for laboratory use by a trainer in the basic and advanced type of aviation electronics technician school.

4. PLANNED SITE OF INSTALLATION

Any classroom or lab.

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation area: Indoors, designed for table-top operation
  - b. Size of Shipping Package: Approximately 20" x 14" x 6"
  - c. Number of pieces: three (chassis, 11 printed circuit boards and brackets.)
  - d. Size: 17" x 10" x 3"

## DEVICE 6B12

(Training Device Information Sheet, Cont'd)

- e. Weight: Estimated 40 lbs.
- f. Power Required: 117 VAC, 50/60 CPS, 50 Watts.
- g. Other Equipment Required: Oscillocope, and Volt-ohmeter, 20,000 ohms per volt
- h. Special Considerations: Trainee should have a basic background on precautions in handling and use of transistors.
- 6. TRAINING AGENCY

DCNO(AIR)

7. PROJECTED AVAILABILITY DATE

Presently available

Device: 30 Bit Remote Control Register

Device No: 6F1

#### 1. GENERAL DESCRIPTION

The Device 6F1 consists of an enlarged representation of a 30 Bit Register with a remote instructor's control box containing switches for activation of the lights (Bits) in the enlarged register. The register and control unit are connected by a 20 foot cable.

## 2. TRAINING TASK PERFORMED

- a. Enables the instructor to display the basic principles of machine numbers; that is, the Binary System, Binary to Octal conversion, positive and negative numbers, and simple digital computer logic functions.
- b. Device 6F1 will demonstrate any computer register function (up to 30 Bits).

## 3. CATAGORIES OF PERSONNEL TRAINED

Officer and Enlisted men being training either as Computer Programmers or Computer Maintenance Technicians.

## 4. PLANNED SITE OF INSTALLATION

- a. Naval Tactical Data System School, Naval Training Center, San Diego, California.
  - b. Naval Air Technical Training Command, Glynco

## 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

- a. Installation area: Classroom
- b. Number of pieces: Two Register and Control Console
- c. Size of Shipping Package: Not yet determined
- d. Size: Register 54" X 8" X 6" Remote Control: 22" X 5" X 4"
- e. Weight: Approximately 30 pounds
- f. Power Required: 115V 60 cycles, 4.5 amperes maximum
- g. Other Equipment Required: None
- h. Special Considerations: None

# 6. TRAINING AGENCY

BUPERS

## 7. PROJECTED AVAILABILITY DATE

Lead Time approximately three months.

Device: COMPUTER CONTROL DEMONSTRATOR

Device No.: 6F3

# 1. GENERAL DESCRIPTION

The Device 6F3 is an enlarged panel representative of the AN/USQ-20 Computer Console. It contains all register lights (BMS) of the basic computer. All lights can be activated, manipulated or extinguished by following the normal computer operations. Computer controls at the bottom of the console are also provided with proper logic to simulate computer operations. Instructor controls are provided on the rear for activation of indicator lights on the lower computer register control panel. It is mounted on a mobile stand so that it can be moved from class to class.

## 2. TRAINING TASKS PERFORMED

- a. Provides a classroom device to assist in the familiarization of the student with the inputs and readouts of a typical Navy Computer such as the AN/USQ-20.
  - b. Develops an understanding of specialized computer language.
- c. Develops an understanding of computer functioning in terms of Binary and Octal numbering systems.
  - d. Develops an understanding of computer line functions.
- e. Develops an understanding of instructions required by the computer to perform specific tasks.
  - f. Develops skill in converting basic information into a digital program.
  - g. Develops skill in inserting a program into the computer.
- h. Develops skill in analyzing the computer readout and converting it to useful terminology.

## 3. CATAGORIES OF PERSONNEL TRAINED

The trainees will be both officer and enlisted personnel who should be familiar with the Binary and Octal systems and conversions.

Device 6F3 may also be used in orientation courses on AN/USQ-20 Computer.

# DEVICE 6F3

(Training Device Information Sheet, Cont'd)

- 4. PLANNED SITE OF INSTALLATION
- a. Naval Tactical Data School, Naval Training Center, San Diego in Basic Programmer and Intermediate Programmer Courses.
- b. Fleet Anti-Air Warfare Training Center, NTDS courses, Dam Neck, Virginia Beach, Virginia.
- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation area: Classroom
  - b. Size of Shipping Package: Not yet determined
  - c. Number of pieces: Two--Stand and Panel
  - d. Size: Height 78" Width 96" Depth 30"
  - e. Weight: 300 pounds
  - f. Power Required: 115V 60 cycle, 10 amperes maximum
  - g. Other Equipment Required: None
  - h. Special Considerations: None
- 6. TRAINING AGENCY

BUPERS

- 7. PROJECTED AVAILABILITY DATE
  - a. One unit installed at Naval Tactical Data School, October 1962
- b. One unit to be completed by NTDC Regional Office, San Diego by 1 May 1963.

11 APRIL 1963

DEVICE: TRAINING AID, ELECTRONIC CIRCUIT, SINGLE SIDEBAND

DEVICE NO.: X8D18

## 1. GENERAL DESCRIPTION

The device X8D18 is a complete Single (SSB) transmitter and receiver, the basic stages of which are sectionalized on separate removable panels. The panels are displayed on a light-weight rack and may be stored, when not in use, in an enclosure provided at the base of the rack. Power for operation of the device is provided by two supplies located in the rack cabinet. Permanently installed cables in the rack, and conveniently located output connectors provide for ease of operation in demonstrating the panels either individually or as a group. A separate signal analyzer and audio generator is provided which may be located in any convenient place for use with the demonstration. The device is unclassified. Frequency range of the device X8D18 is 3.4 to 7.4 MC covered in 200 K,C, segments.

#### 2. TRAINING TASKS PERFORMED

The device is a classroom type of demonstrator for use by the instructor. It provides a means for demonstrating the methods used in generating single sideband signals, how single sideband differs from other systems, circuit operation, and any specialized aspects of single sideband communications equipment maintenance. Visual representation of circuit performance may be made, and evidence of the effects of defective components or incorrect operating may be displayed. Two different methods of sideband generation can be displayed, i.e., phasing or mechanical filter.

## 3. CATEGORIES OF PERSONNEL TRAINED

The trainer is recommended for use in the advanced type of electronic technicians school or for trainees who are graduates of a class "A" or basic electronics school.

## 4. PLANNED SITE OF INSTALLATION

One R&D prototype delivered to NATTC Memphis, AT(B) School, April of 1962.

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation area: Average Classroom
  - b. Size of Shipping Package: Approximately 400 cu. ft.
  - c. Number of Pieces: Two
  - d. Size: Assembled device -- 79" x 64" x 28"

# DEVICE X8D18

(Training Device Information Sheet, Cont'd)

- e. Weight: X8D18 -- 342 lbs.
  Instrument Stand -- 210 lbs.
- f. Power Required: 115 VAC, 60 cycle 650 watts
- g. Other Equipment Required:

Signal Generator Vacuum Tube Voltmeter A-C Vacuum Tube Voltmeter Oscilloscope Audio Wattmeter

6. TRAINING AGENCY

DCNO(AIR)

7. PROJECTED AVAILABILITY DATE

One (1) R&D delivered to NATTC, Memphis. Seven (7) units in process of procurement. Expected delivery date of seven production units is June 1964.

11 APRIL 1963

DEVICE: TRAINING AID, ANIMATED PANEL, AN/ARC-38 AND AN/ARC-52 RADIO SET AUTO-POSITIONERS

DEVICE NO.: X8D20

## 1. GENERAL DESCRIPTION

The device consists of a two panel, vertically hinged animated presentation, displaying the AN/ARC-38 Auto-positioner on the left hand panel and the AN/ARC-52 Auto-positioner on the right hand panel. Each panel authentically demonstrates the functions of all components of the auto-positioner system and is intended for use in teaching the MANUAL MODE operation, circuit tracing, and maintenance of the systems under operating conditions. The panel(s) is designed for use with a class of approximately 20 trainees, who are to receive basic and semi-advanced training in the principles of operation and maintenance of the auto-positioner systems. The device is unclassified.

## 2. TRAINING TASKS PERFORMED

The device is a classroom demonstrator to be used by the instructor as a teaching aid to demonstrate visually the operating sequence of an auto-positioning system as used with the AN/ARC-38 and AN/ARC-52 communication equipments. Circuit tracing, trouble-shooting and maintenance can be performed under actual operating or static conditions.

3. CATEGORIES OF PERSONNEL TRAINED

The trainer can be used in the class A, B and C type of electronic maintenance schools where the operation of a Collins type of auto-positioning system is taught.

4. PLANNED SITE OF INSTALLATION

FAETULANT, NORFOLK and FAETUPAC, SAN DIEGO

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation Area: Indoors, any school-type classroom
  - b. Size of Shipping Package: 33.4 cu. ft.
  - c. Number of Pieces: Two
  - d. Size: Assembled device -- 96"1 x 10"w x 84"h

(SHEET 1 OF 2)

# DEVICE X8D20

# (Training Device Information Sheet) (Cont.d)

e. Weight of each Panel:

AN/ARC-38 Panel-225 lbs.

AN/ARC-52 Pane1-200 1bs.

- f. Power Required: 115V AC 60 cps
- g. Other Equipment Required: None
- 6. TRAINING AGENCY

DCNO(AIR)

7. AVAILABILITY DATE:

May 1963

Device: RADIOLOGICAL DECONTAMINATION TRAINER

Device No: 11F3

#### 1. GENERAL DESCRIPTION

Device 11F3 is a portable, compact unit used to mix Bromine-82 produced by reactor irradiation of dry potassium bromide powder, contained in a sealed quartz-capsule, and water. The Radiological Training consists of the following items: a stainless-steel-clad uranium shipping container, a capsule handling tool, a mixing tank, capsule opener, spreading hose and lance, a compressed gas tank and gas bottle and a transportation cart. The Bromine 82 is contained in a capsule made of aluminum and must be ordered for delivery just prior to using the trainer. Test areas for using the device must be restricted for radiation control purposes.

## 2. TRAINING TASKS PERFORMED

Device 11F3 is to be used by training activities to simulate the radiation and contamination control problems produced by a radiological accident or the detonation of a nuclear weapon. The device can contaminate an area so that the trainee can practice decontamination procedures. Gamma dose rates of 100 mr/hr at 3 ft. from the surface can be produced over areas up to 5000 sq. ft.

## 3. CATAGORIES OF PERSONNEL TRAINED

Passive Defense Units, Personnel Decontamination Teams, Area Decontamination Teams and Civil Defense Agencies requiring realistic training in control and decontamination procedures may utilize the device.

# 4. PLANNED SITE OF INSTALLATION

a. U.S. Navs! Schools Command, Treasure Island, San Francisco Restricted Weapons Defense Department, Damage Control.

b. U.S. Naval Unit, U.S. Army Chemical Corps School, Fort McClellan, Alabama.

# 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

- a. Installation Area: Outside installation, Test areas for using the device must be restricted for radiation control purposes.
  - b. Size of Shipping Package: Not yet determined
  - c. Number of pieces: Nine
- d. Size: With all components mounted on the cart (less the spreading lance) 23" wide, 36" long, 36" high.
  - e. Weight: Approximately 100 pounds.

# DEVICE 11F3

(Training Device Information Sheet, Cont'd)

- f. Power Required: N/A
- g. Other Equipment Required: Protective clothing

Radiac Set AN/PDR-27 or equivalent.

- h. Special Consideration: Test areas for using the device must be restricted for radiation control purposes. All use of the radio-active material must conform with Title 10, Code of Federal Regulations, Part 20 "Standard for Protection Against Radiation (10CFR20).
- 6. TRAINING AGENCY

BUPERS

7. PROJECTED AVAILABILITY DATE:

May 1963

DEVICE: ALPHA FIELD SURVEY METER DEMONSTRATOR

DEVICE NO: 11F5

## 1. GENERAL DESCRIPTION

Device 11F5 duplicates the size, shape and outside configuration of the Radiac Set AN/PDR-56. Part of the device consists of a simulated source of alpha radiation which is a fluourescent powder soluable in water. Internal structure of Device 11F5 consists of an optical system and an ultra-violet light source.

## 2. TRAINING TASKS PERFORMED

Device 11F5 may be used in basic, intermediate and advanced courses in ABC Warfarc, Ordnance activities, radiation survey teams and other training activities conducting alpha survey training can use the device which duplicates the operational characteristics of Radiac Set AN/PDR-56 with no danger to personnel and materials which would normally be present in the use of an alpha-emitting radioactive source.

## CATAGORIES OF PERSONNEL TRAINED

- a. Officer and Enlisted personnel in basic ABC courses.
- b. Personnel engaged in refresher training in radiological and decontamination training.
  - c. Damage Control personnel ashore and afloat.

# 4. PLANNED SITE OF INSTALLATION

Training Activities conducting Alpha survey training Activities are to be designated by Bureau of Personnel.

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation area: Classroom or Demonstration Area indoors or outdoors.
  - b. Size of shipping package: Approximately 11" X 8" X 12".
  - c. Number of pieces: Three: Radiacmeter Probe

Contaminant

d. Size: Radiacmeter approximately 8" long, 4½" wide, and 3½" high (less handle), with handle 6½" high.

Probe: - Approximately 8" long, 3" wide and 2" high (less handle), with handle 8½" high.

# DEVICE 11F5

(Training Device Information Sheet, Cont'd)

- e. Weight: Not yet determined
- f. Power Required: Rechargeable batteries
- g. Other Equipment Required: None
- h. Special Considerations: None. Storage and handling requirements duplicate those of Radiac AN/PDR-56.
- 6. TRAINING AGENCY

BUPERS

7. PROJECTED AVAILABILITY DATE:

FY 1964

12 APRIL 1963

DEVICE: TECHNAMATION MATERIALS KIT WITH POLARIZING SPINNER

DEVICE NO.: 11H43A

1. GENERAL DESCRIPTION

The device consists of a supply of various types of polarized plastic sheets and tinted sheets for use in making polarized transparencies to depict different types of motion - linear, turbulence, swirling, radiating, rotating, etc.

The kit includes a pocket spinner for testing purposes during the construction of the polarized transparency, and an electrically driven polarizing spinner. That spinner, when attached to the projection lens of an overhead projector in the IBC series, provides for the animated projection.

The device is unclassified.

2. TRAINING TASKS PERFORMED

Not applicable

3. CATEGORIES OF PERSONNEL TRAINED

Not applicable

4. PLANNED SITE OF INSTALLATION

Not applicable

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

Not applicable

6. TRAINING AGENCY

DCNO(AIR)

7. AVAILABILITY

Delivered Due Dec 1963

13 Units 50 units

8 April 1963

Device: FIRING CIRCUIT PANEL, MK 10 MOD 0, GUIDED MISSILE LAUNCHING SYSTEM (GMLS)

Device No.: 12D1

## 1. GENERAL DESCRIPTION

This device will display a simplified schematic of the electrical distribution of the Mk 10-0 GMLS firing circuits. The panel will employ animation techniques to depict the sequencing of the various components associated with the MK 10-0 GMLS. The device will derive all power and logic signals from Device 4H2, Logic Programmer, Animated Panel (Nuclear Weapon/Guided Missile).

## 2. TRAINING TASKS PERFORMED

This device will be used as a visual aid by the instructor in formal classroom presentations to teach students theory of operation, electrical distribution, and sequence of the MK 10-0 GMLS firing circuits. The device will be used in the MK 10-0 GMLS Glass C Course, Gunner's Mate School, Great Lakes.

#### 3. CATEGORIES OF PERSONNEL TRAINED

Students will be Navy Gunner's Mates of First Class and Chief Petty Officer rating, with a wide variety of service and educational experience.

# 4. PLANNED SITE OF INSTALLATION

U.S. Navy Gunner's Mate School, Great Lakes Naval Training Center.

## 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

- a. Installation Area: Classroom, mobile from room to room
- b. Size of shipping package: not yet determinedc. Number of pieces: one
- d. Size: 4' x 8' panel on a movable stand
- e. Weight: 40 lbs. approx.
- f. Power Required: Device receives all power from Device 4H2 which requires 110V, 60 cycle.
- g. Other Equipment Required: Device 4H2, Logic Programmer, Animated Panel (Nuclear Weapon/Guided Missile).

## 6. TRAINING AGENCY

BUPERS

# 7. PROJECTED AVAILABILITY DATE

June 1963

Device: ASROC SHOWEBASED TRAINER (MK 114 FCS MOD)

Device No: X14A2

## 1. GENERAL DESCRIPTION

Device X14A2 located at the FTC, NCRVA will be modified by the addition of simulated MK 114 Fire Control System capabilities. A simulated MK 53 Fire Control Console, a simple DASH system, a Torpedo simulator, and a reworked Instructors Console scoring panel will be provided to achieve this capability. Modification equipments are classified CONFIDENTIAL.

## 2. TRAINING TASKS PERFORMED

The added capability will provide the means to train men in the operation and tactical use of the MK 114 Fire Control System in anti-submarine warfare.

3. CATEGORIES OF PERSONNEL TRAINED.

The entire team of an ASROC ship equipped with a MK 114 FCS.

4. PLANNED SITE OF INSTALLATION

Fleet Training Center, Norfolk

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

New equipments will be installed in existing space at the training site.

6. TRAINING AGENCY

CNO (Op-32)/BUPERS

7. PROJECTED AVAILABILITY DATE

(for this mod.) Oct 1964

Device: TRAINER, AN/ASA-16 OPERATOR 13 March 1963

Device No.: X14B20

# 1. GENERAL DESCRIPTION

The device will be a fixed installation classroom trainer with provisions for simultaneous group observation training for 20 students. It will consist of an entire AN/ASA-16 installation as represented in the aircraft, with provisions to simulate a complete ASW Tactical Mission.

The device is classified Confidential.

## 2. TRAINING TASKS PERFORMED

The device will provide training in the use and function of AN/ASA-16 equipment.

3. CATEGORIES OF PERSONNEL TRAINED

The trainees will be Naval Aviation Officers engaged in training as ASW Tactical Coordinators.

4. PLANNED SITE OF INSTALLATION

FAETULANT DET TWO, NAS JACKSONVILLE

- 5. INSTALLATION INFORMATION
  - a. Installation Area: A previously prepared air conditioned classroom
  - b. Other installation requirements: Not yet determined
- 6. TRAINING AGENCY

DCNO (AIR)

7. PROJECTED AVAILABILITY DATE

September 1963

Device: TRAINER, AN/ASN-30 OPERATOR

13 March 1963

Device No.: X14B25

## 1. GENERAL DESCRIPTION

The device will be a fixed installation classroom trainer with provisions for simultaneous group observation training for 25 students. Through the use of a television monitor and a Tactical Display Unit, the group will observe a complete ASW mission utilizing AN/ASN-30 equipment represented in the S-2E aircraft.

The device is classified Confidential.

# 2. TRAINING TASKS PERFORMED

The device will provide training in the use and function of AN/ASN-30 equipment.

3. CATEGORIES OF PERSONNEL TRAINED

The trainees will be Naval Aviation Officers engaged in training as ASW Tactical Coordinators.

4. PLANNED SITE OF INSTALLATION

COMNAVAIRPAC

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation Area: A previously prepared air conditioned classroom
  - b. Other Installation Requirements: Not yet determined
- 6. TRAINING AGENCY

DCNO (AIR)

7. PROJECTED AVAILABILITY DATE

October 1963

Device: TRAINER, JULIE/JEZEBEL ROLLOUT (SOLTS)

Device No.: 14B27 4 April 1963

## 1. GENERAL DESCRIPTION

This device will provide signal simulation (controlled by the instructor) to the ASW Aircraft Integrated Data Display System operational equipment by activating either the Julie or Jezebel Detection Systems or the MAD recorder depending on the type aircraft being used, or the particular phase of the ASW exercise. All components are mounted on a large cart to facilitate movement to the vicinity of the aircraft. Cabling is provided for interconnecting the trainer with the operational equipment in the aircraft.

The device is classified Confidential.

## 2. TRAINING TASKS PERFORMED

The device is used to train the ASW aircraft team made up of the Pilot, Copilot, Navigator, Tactical Coordinator, J/J Operators, MAD Operator and Ordnanceman in the skills required for all phases of an ASW problem.

3. CATEGORIES OF PERSONNEL TRAINED

The trainees will be Naval Aviation Officers and enlisted men, who will have had varying amount of ASW experience.

4. PLANNED SITE OF INSTALLATION

Naval Aviation activities engaged in training the ASW aircraft team.

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
- a. Installation Area: adjacent to an aircraft outdoors or in a hangar.
  - b. Size: 55" X 30" X 32"
  - c. Number of Pieces: one
  - d. Power Required: Aircraft Auxiliary Power Supply

## DEVICE 14B27

(Training Device Information Sheet, Cont'd)

6. TRAINING AGENCY

DCNO (AIR)

- 7. PROJECTED AVAILABILITY DATE
  - 15 Units have been delivered
  - 7 additional units have been allocated for delivery in Sep 1963.

## DEVICE INFORMATION SHEET

Device: TRAINER, AQS-10 AIRBORNE SONAR GROUP

Device Number: X14E10 7 March 1963

## 1. GENERAL DESCRIPTION

This device consists of a classroom trainer which represents the AQS-10 Sonar Operator Station as it appears in the SH-3A aircraft. This device will provide realistic training in both detection and classification procedures. Realistic simulation will be provided to each of the six sonar booths by means of high fidelity audiovideo magnetic instrumentation tape.

This device is Confidential.

2. TRAINING TASKS PERFORMED

This device provides realistic operator training in the use of the  $\Lambda QS\text{--}10~\Lambda irborne$  Sonar.

3. CATEGORIES OF PERSONNEL TRAINED

The trainer is used for simultaneous training of six AQS-10 sonar operators.

4. PLANNED SITE OF INSTALLATION

Undetermined

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

Unknown - device is in the design stage.

6. TRAINING AGENCY

DCNO (AIR)

7. PROJECTED FLEET AVAILABILITY DATE

September 1964.

Device: SHIPBOARD AN/SQS-26 SONAR CLASSIFICATION TRAINER

Device No.: X14E12 8 Mar 1963

## 1. GENERAL DESCRIPTION

The device consists of prototype high fidelity magnetic tape recording and playback equipment designed for use with an AN/SQS-26 sonar installation aboard ship. Signals are recorded and played back at a point in the SQS-26 circuitry closely following the transducer. Some of the tape channels are used for voice commentary and syncronization signals. Playback of recordings results in realistic activation of the audio, graphical, and video displays of the sonar.

The device is unclassified. The device manual is classified CONFIDENTIAL.

## 2. TRAINING TASKS PERFORMED

The device provides realistic training in the detection and classification of AN/SQS-26 sonar contacts. Also provided is limited training in the use of controls and modes of operation ("operator training").

3. CATEGORIES OF PERSONNEL TRAINED

The device is used for the training of AN/SQS-26 sonar operators - sonarmen.

4. PLANNED SITE OF OPERATION

Aboard a ship not yet designated.

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

Adequate space must be provided aboard ship.

14 March 1963

DEVICE: STUDY CARD SET, SONAR DETECTING-RANGING SET, AN/SQS-26AX

DEVICE NUMBER: X14E13

## 1., GENERAL DESCRIPTION

This device is a classroom aid to assist in electronic troubleshooting maintenance training. The device consists of 100 troubleshooting problems on the Sonar Detecting-Ranging Set, AN/SQS-26AX in the form of problem work sheet and auxiliary sheets. The auxiliary sheets consist of the instructor's guide, students information sheet, normal reading sheet and waveforms sheet. Most operational or maintenance problems that can occur in the operational equipment can be effectively duplicated on paper in this device. Each problem worksheet set contains one complete problem and all the pertinent data (waveforms, voltages, resistance readings and operating conditions) required to solve it. This information is so stated and arranged on the sheets that the trainee must exercise the exact same logical thinking and selection of procedures he would employ if he were actually working on the operational equipment. By erasing the overlaid pattern covering the various readings the student will disclose the same indications he would receive at the test points on the operational equipment.

This device is classified confidential.

## 2. TRAINING TASKS PERFORMED

This device shall be used in the classroom to support training in trouble-shooting procedures and as an evaluating vehicle of the trainee's abilities to theoretically trouble-shoot the operational equipment.

## 3. CATEGORIES OF PERSONNEL TRAINED

It is anticipated that trainees will be enlisted personnel with a primary interest in the maintenance of the operational Sonar Detecting-Ranging Set, AN/SOS-26AX.

## 4. PLANNED SITE OF INSTALLATION

It is anticipated that the device will be used at the Fleet Sonar School, Key West, Florida.

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

None required

TRAINING AGENCY

BUPERS

7. PROJECTED AVAILABILITY DATE

January 1965

Device: SONAR OPERATOR TARGET CLASSIFICATION TRAINER (5 station)

Device No: X14E14

## 1. GENERAL DESCRIPTION

This prototype device consists of Device 14E2 with improved circuitry and augmented by a coupling cabinet (similar to that used in Device 14E3) and on instructor monitoring facility. The device will play into up to five (5) AN/SQS-4 (or modified versions thereof) sonar stacks realistically activating their audio and video displays. The device is unclassified. The device manual is classified CONFIDENTIAL.

## 2. TRAINING TASKS PERFORMED

The device provides for training in detection and classification of sonar contacts. It also provides for limited operator training in the use of controls and modes of operation.

3. CATEGORIES OF PERSONNEL TRAINED

Sonarmen

- 4. PLANNED SITE OF INSTALLATION (PROTOTYPES)
  - a. Fleet Training Center, Newport, R.I.
  - b. Fleet Training Group, Pearl Harbor
- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Appropriate space and power in a school building must be provided.
- b. Sonar stacks and constructed cubicles (trainee stations) must be provided as GFM.

Device: TRAINING AID, ASW TRANSPARENCIES KIT

13 March 1963

Device No.: 14H5

# 1. GENERAL DESCRIPTION

This device consists of a set of projectable transparencies, illustrating a wide variety of subjects associated with Air ASW. The kit includes transparencies depicting the general ASW problem, specific Air ASW sensors and information on new ASW equipment.

The device is classified Confidential although some individual transparencies are unclassified.

## 2. TRAINING TASKS PERFORMED

This device will be used in a classroom with an overhead projector as a visual aid to support lectures concerning Air ASW.

## 3. CATEGORIES OF PERSONNEL TRAINED

The device is designed to aid classroom training to both Officer and enlisted personnel engaged in training on various ASW subjects.

4. PLANNED SITE OF INSTALLATION

Not applicable

5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

Not applicable

6. TRAINING AGENCY

DCNO (AIR)

7. PROJECTED FLEET AVAILABILITY DATE

August 1963

Device: SHIPBOARD UNIVERSAL RADAR LAND MASS SIMULATOR

Device No.: 15A14

# 1. GENERAL DESCRIPTION

The Shipboard Universal Radar Land Mass Simulator depicts five (5) Radar units used aboard the following attack aircraft; A3D, A4D, A3J and A2F.

# 2. TRAINING TASKS PERFORMED

The Device 15A14 will provide proficiency training for Land Mass Radar Predicition and terrain avoidance.

## 3. CATEGORIES OF PERSONNEL TRAINED

The device will be used by radar operators, pilots and briefing officers of the Fleet.

## 4. PLANNED SITE OF INSTALLATION

West Coast: NAS Whidbey Island and NAS Lemoore

East Coast: NAS Oceana and NAS Sanford

# 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

- a. Indoors
- b. Portable and designed to be placed aboard attack class carriers.
- c. Four units
- d. Size standard double locker size
- e. Power required Designed to accommodate both shipboard and shore based currents

## 6. TRAINING AGENCY

BUWEPS

## 7. PROJECTED AVAILABILITY DATE

Spring 1963

11 APRIL 1963

DEVICE: AN/TPS-34 TRAINER

DEVICE NO.: 15A16

## 1. GENERAL DESCRIPTION

The device is to be a universal anti-jamming operator trainer which can be used with any Marine Corps radar which has ECCM capabilities. Since the purpose of the trainer is to teach AJ operators it will operate only two targets. It is designed to generate almost all known types of ECM.

The device will be confidential.

## 2. TRAINING TASKS PERFORMED

This device can be used to teach the AJ operators the skills needed for effective counter measures against enemy counter measures.

## 3. CATEGORIES OF PERSONNEL TRAINED

The trainer can be used to teach A.J. operators in the use of the ECCM capabilities of Marine Corps radars.

4. PLANNED SITE OF INSTALLATION

Not applicable

## 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

This device will be fitted into a trailer. It is anticipated that a  $2\frac{1}{2}$  ton truck or its equivalent will be needed to transport the trailer to the planned instruction site.

6. TRAINING AGENCY

CMC (AAE)

# 7. PROJECTED AVAILABILITY DATE

(Subject to U.S. Marine Corps Evaluation FY 65)

11 APRIL 1963

DEVICE: ARTILLERY, LAND MINES AND MORTAR SIMULATOR

DEVICE NO.: 17A19

#### 1. GENERAL DESCRIPTION

This is a simulator used to duplicate three levels of high explosives, artillery, Mortar and land mines. This is accomplished in a bell shaped metal chamber by an explosion, triggered by a spark plug, of a metered mixture of oxygen and propane. This device was developed to be an integral part of the Combat Rifleman Environmental Training Range.

The device is unclassified.

## 2. TRAINING TASKS PERFORMED

This device can be used to train Marines to become accustomed to battle field sounds.

## 3. CATEGORIES OF PERSONNEL TRAINED

The trainer can be used in basic combat training as well as advanced tactical problems to simulate battfield sounds.

# 4. PLANNED SITE OF INSTALLATION

Any range site suitable for combat exercises.

# 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

This device is usually used on a combat range where small arms ammunition is used for scoring. The device must be protected either by digging a trench deep enough to protect it from small arms fire or if used on ground level, suitable protection must be constructed in front of the device.

## 6. TRAINING AGENCY

CMC (A03C)

# 7. PROJECTED AVAILABILITY DATE

(Subject to satisfactory U.S. Marine Corps Evaluation FY 63)

Device: SIMULATOR, FIRE CONTROL AND LAUNCHER, (DE MK-9)

<u>Device No.</u>: 20C7 1 April 1963

## 1. GENERAL DESCRIPTION

This device shall be a dynamic fire control and launcher feed back simulator for an operational DE MK-9 located in the weapons control station of a DLG ship mockup. Target data will be provided to the DE MK-9 from Device RS-14, an AN/SPS-39 radar, and NTDS equipment. An additional target selection and tracking console capable of tie-in with the DLG MK-9 components is to be located in a DDG ship mockup.

The device is classified CONFIDENTIAL.

## 2. TRAINING TASKS PERFORMED

This device when used in conjunction with the RS-14, AN/SPS-39, DE MK-9, NTDS and other operational equipments within the mockups will provide training in the coordination between CIC and Weapons Control for both NTDS (DLG) and Non-NTDS equipped (DDG) ships personnel.

## 3. CATEGORIES OF PERSONNEL TRAINED

CIC and Weapons Control Officers and men of DLG and DDG surface-to-air missile ships.

## 4. PLANNED SITE OF INSTALLATION

Fleet Anti Air Warfare Training Center, Point Loma, San Diego, California.

- 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS
  - a. Installation area: Within the FAAWTC and adjacent to equipments serviced.
  - b. Size of Shipping Package: Undetermined as yet.
- c. Number of Pieces: Three, one instructor's console, two unattended cabinets and cabling.
  - d. Size: Undetermined as yet.
  - e. Weight: Undetermined as yet.
  - f. Power Required: Undetermined as yet.
  - g. Other Equipment Required: DE MK-9, RS-14, AN/SPS-39.

# DEVICE 20C7

(Training Device Information Sheet, Cont'd)

- 6. TRAINING AGENCY

  CNO (OP 34)/BUPERS
- PROJECTED AVAILABILITY DATE
   July 1963.

Device: Torpedo Data Computer Operator Trainer

Device No: 21B58

## 1. GENERAL DESCRIPTION

The device consists of a "Master" Torpedo Data Computer MK IV Mod 6, twelve "Slave" Torpedo Data Computers MK IV (various Mods), and an Instructor's Console and Servo control unit. In anticipation of expansion of the device at some later date, the capacity for serving a maximum of eighteen "Slave" Torpedo Data Computers MK IV (various Mods) has been designed into the device.

Each Torpedo Data Computer (Master and Slave) can be operated individually as a separate F.C. computer. However, the units of the device are so interconnected electrically that the Instructor may set the same values for Own-ship's course and Speed into the "Master" and all "Slave" Torpedo Data Computers simultaneously, by manipulating the proper controls on the Instructor's console. The Instructor may also change the set values for Own-ship's course and Speed, by the same controls.

The Instructor may also, by setting a specific target course/speed/range solution into the "Master" Torpedo Data Computer, activate the observed Bearing and Range dials of the receiver section of each "Slave" Torpedo Data Computer in such a manner as to simulate the introduction of observed data to each "Slave" Torpedo Data Computer, as they would appear in the receiver section in an operational situation. The observed data so introduced may simulate either continuous (i.e., Sonar) or intermittent (i.e., Periscope or radar bearings, and radar ranges) information.

The Instructor may introduce offsets "Spots" into the observed bearing and range information being fed to the "Slave" Torpedo Data Computers, by means of Controls on the Instructor's Console.

In a training situation, two trainees (Operator and assistant operator) man each Slave Torpedo Data Computer, while the Instructor either:

- a. Introduces offsets "Spots" of observed range and bearing in a static (non-generating) situation (i.e., reading and matching drill), or
- b. Feeds observed Target range and bearing (as generated by the "Master" Torpedo Data Computer) to the receiver section of each "Slave" Torpedo Data Computer, in a manner simulating that practiced in an operational situation.

(Training Device Information Sheet, Cont'd)

This device is unclassified.

## 2. TRAINING TASKS PERFORMED

The device provides a tool for the training of junior officers in Basic Fire Control geometry, and in basic computer operation.

Since the MK IV Torpedo Data Computer is still used in many operational Submarines, the device provides training for junior officers in the principles and techniques of operation of the MK IV Torpedo Data Computer UWFCS.

The device provides a tool for the training and refreshing of experienced submarine officers in the principles and techniques of fire control analysis as applied to the more advanced types of attack situation (bearings - only solution).

#### 3. CATEGORIES OF PERSONNEL TRAINED

The device is used by the Basic officer's course, Submarine School, to instruct inexperienced junior officers in basic fire control geometry and computer operation, and to instruct and drill experienced submarine officers in the mental analysis required for the more advanced fire control problems.

## 4. PLANNED SITEOF INSTALLATION

The device will be installed in Gilmore Hall, Submarine School, U.S. Naval Submarine Base, New London, Conn.

# 5. INSTALLATION AND INTRODUCTORY REQUIREMENTS

a. Installation area: Indoors, in single room approximately 30' x 40'. Each torpedo data computer weighs approximately 1200 lbs; Instructor's console servo control unit weighs approximately 600 lbs. Device requires 110V 60 cycle, 115V DC power supplies.

# 6. TRAINING AGENCY

Bureau of Naval Personnel

# 7. PROJECTED AVAILABILITY DATE

December 1963